

Channels

Articles

Materials

Events

Brands

SEARCH



Sign in

Join now

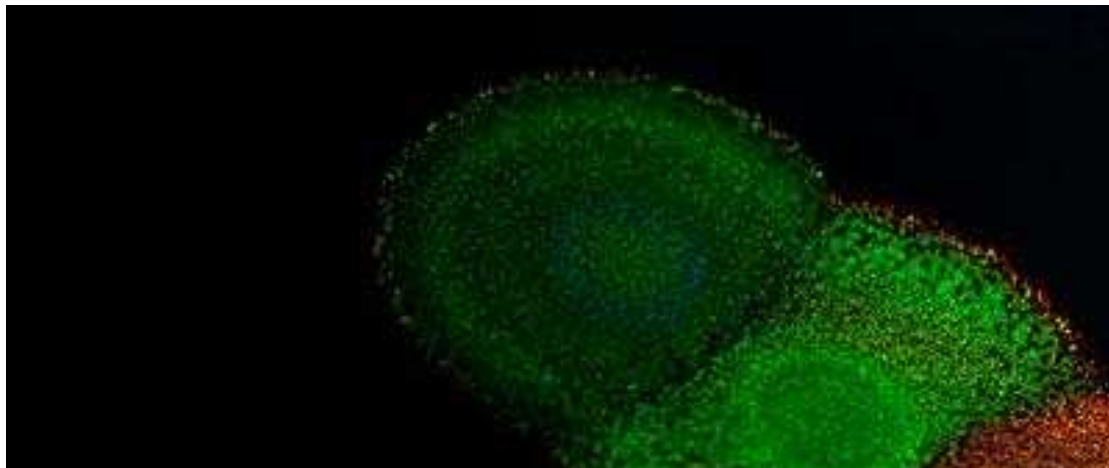
This article is part of the following channel(s)

BIOBASED

INNOVATION

SUSTAINABLE

# GROWING PAINTS USING COLOURFUL BACTERIA



Share

Tweet

Share

Email

20 May 2018

We have seen [plastic eating bacteria](#), [bioplastic producing bacteria](#), [brick-growing bacteria](#)...

Needless to say, bacteria can be very useful in the production (or destruction) of materials, and now paint-growing bacteria can be added to the list. A team from the [University of Cambridge](#) and a Dutch company called [Hoekmine BV](#) have outlined how we could grow organic [paints](#) and [coatings](#) out of vibrantly coloured bacteria colonies.

In nature, you can find materials with metallic shimmers, for instance peacock feathers and butterflies. These colours aren't produced by pigmentation, but rather tiny structures that scatter light. These structural colours are difficult to reproduce, but the research by the University of Cambridge and Hoekmine is a step in the right direction.

The bacteria the researchers used are called the flavobacteria, and colonies of them appear as bright metallic



colours, thanks to the microscopic internal structure. These structures, like the ones in peacock feathers, reflect the light at different wavelengths, and create in our eyes a certain colour.

The natural colour of the colony is a metallic green. The researchers decided to map the genes responsible for the structural colouration in the bacteria, to understand how nanostructures are engineered in nature. They engineered the flavobacteria with specific

Channels Articles Materials

mutations, such as the size of the bacteria and how well they could move. These tweaks change the colour the colony appears to be, and the researchers were able to make virtually any colour in the visible spectrum.

According to the researchers, the engineered bacterial colonies could be used to grow organic, biodegradable and non-toxic paints and coatings in any colour.

Photo: University of Cambridge

Events

Brands

Sign in

Join now

SEARCH



## COMMENTS

You must be [logged in](#) to post a comment.

PREVIOUS ARTICLE

NEXT ARTICLE

[HOME](#) / [ARTICLES](#) / GROWING PAINTS USING COLOURFUL BACTERIA

[BACK TO TOP](#) ▲

### HOME

### MATERIA

### CONTACT

[About Materia](#)  
[Contact](#)  
[Advertise](#)  
[Privacy Statement](#)  
[Register](#)  
[Sitemap](#)

[Materia Exhibitions](#)  
 Naarden  
 The Netherlands  
 +31 (0)20 71 30 650  
[info@materia.nl](mailto:info@materia.nl)

### CONNECT

### RECEIVE OUR WEEKLY NEWSLETTER

**SIGN UP NOW!**